

COMMONWEALTH OF KENTUCKY

WASTE TIRE MARKET DEVELOPMENT CRUMB RUBBER GRANT APPLICATION



PURPOSE

This grant provides financial assistance to projects that develop crumb rubber or mulch beneficial end-use markets for waste tires generated in Kentucky



Division of Waste
Management



Environmental and Public
Protection Cabinet



GENERAL INFORMATION

The cabinet is accepting grant proposals that promote the use of recycled waste tires for athletic fields, playgrounds, and other crumb rubber or mulch applications. To a limited degree, the cabinet will consider funding research and development proposals for experimental practices or technologies. The cabinet reserves the right to reject proposals that are inconsistent with the expressed market development objectives. The cabinet must approve all materials prior to purchase agreements.

The following is intended to help grant applicants develop a successful athletic field crumb rubber project application. The information provided should serve as a guide to understanding the Environmental and Public Protection Cabinet's (EPPC) technical requirements of a successful project. Additional information has been included to provide the applicant with a general introduction to recognized material types and application methods for this type of project. **Any specific references to private companies are for example only and should not be considered as an endorsement.**

Advantages of Crumb Rubber

Research by Michigan State University has shown good results for football and soccer fields along with golf course paths. See <http://www.css.msu.edu/home/rp-topdress.html> for more information. The area in front of the soccer goals and the midfield area normally wear down over the season, as does the area between the hash marks on a football practice field. Adding sand improves drainage and decreases muddiness, but it cuts the crown of the grass making the problem worse. Adding a three-fourth inch thickness of crumb rubber, in three applications of one-fourth inch thickness, improves turf survivability. The crumb rubber size should be between 10/20-mesh and one-fourth inch. EPPC recommends about one-half of the smaller size and one-half of the larger. Crumb rubber has the following advantages:

- Does not damage the crown tissue
- Lowers impact adsorption, which increases turf life and possibly reduces injuries
- Increases heat retention, which leads to earlier and later growing seasons
- Increases the number of events from about 60 per year for a normal grass field to about 100 for a crumb-rubber treated area (NORTH KINGSTOWN HIGH SCHOOL, NORTH KINGSTOWN, RHODE ISLAND cost analyses)
- Saves \$1,330 per 1,000 SF per year in maintenance costs (mostly in turf re-establishment costs), or about \$22,000 per year for an 81,000 SF field (MSU)

The 10/20-mesh size costs more but works into the turf more quickly, providing faster results. Too much of the small particles may change the soil structure. The ¼ inch takes longer to work into the turf but does not change the soil.

The use of crumb rubber is not a replacement for normal turf maintenance. You must re-establish grass on bare spots before spreading the crumb product. You are also responsible for providing the normal funding for yearly upkeep. Please state the amount of money or effort that you plan to dedicate to maintenance.

FORMAT

The Application is in the following order:

1. Applicant Profile
2. Project Description
3. Material Detail
4. Promotion Detail
5. Milestones
6. Budget Detail
7. Letters of Endorsement

1. APPLICANT PROFILE

Private individuals or entities, owners of commercial entities operating within the Commonwealth of Kentucky, public school districts, private schools, city and county governments, entities operating public parks, and state agencies are eligible to submit applications per KRS 224.50-848. **Due to limited funding this year, prior recipients of waste tire grants are not eligible in this grant cycle for similar projects at the same location.**

Note: The Cabinet reserves the right to reject applications from anyone who has been convicted of defrauding the Commonwealth of Kentucky, has failed to honor a previous contractual agreement with the Commonwealth, has substantially failed to execute a previous project funded by the Commonwealth due to negligence, mismanagement, deception or has performed unsatisfactorily in the execution of any other previous grant or contract.

Signature

The head of the agency or unit should sign the grant request. For a school, this would be the superintendent; for a city, the mayor; or a county, the judge-executive. For those projects that require authorization by a board such as the school board, city council or fiscal court, enclose the minutes of the meeting passing the expenditure of the matching funds.

2. PROJECT RATIONALE

Describe the proposed project and its objectives. Provide a rationale for the effort.

Show the planned increased usage for the subject field(s), i.e., from current use (60 or less, usually) up to 100 games or practices per year. If the fields are already used 100 or more times per year, show increased maintenance savings as described above. Best use may be the increased use of practice fields, followed by the increased use of the main game field for other events such as JV, freshman and Little League or recreation league football games, soccer games, etc.

State whether you plan to cover the entire field with crumb rubber, or just high-use areas such as between the hash marks and 20-yard lines for football or goal/mid-field areas for soccer.

Describe the number of people served by the project and the approximate geographic area or community that will benefit from the project.

For a school, state the boundaries of the area served by that school. For a high school, it may be an entire school district, while for an elementary school it may be a smaller area. State the population served by the school.

For a county or city park, state the county or city served and its population. If county residents use a city park, so state.

3. MATERIAL DETAIL

Provide written documentation regarding the quality, quantity and cost of the waste tire material.

Contractor: If you are using a top-dressing contractor, such as Turf Solutions, JaiTire or similar company, they may furnish the calculations for you in their bid or estimate document.

Quality: State the size of crumb rubber that you are using. The size may be as small as 10/20 mesh, or as large as 1/4 inch crumb rubber.

Quantity: State the amount needed to complete the project. We do have confidence that the crumb rubber top dressed at 0.50 to 0.75 inch levels (1,200 to 1,800 lbs/1,000) will increase turf grass wear tolerance and prevent soil compaction in turf grass maintained above 0.63 inch (MSU study).

For a 3/4 inch depth over an entire football field, you would need 70,000 SF X 1,800 lbs/1,000 = 126,000 lbs or about 125,000 lbs.

Cost: Call several crumb rubber producers. For example, if the quoted price is 20 cents per pound delivered, the total crumb rubber costs would be 125,000 lbs. X \$0.20 = \$25,000.

4. PROMOTION DETAIL

Provide a plan to inform and educate the surrounding community about the project. You may attach examples of proposed newspaper articles or other media types intended to be used.

You may use a press release for this proposal. Here are some pertinent facts for the suggested release:

- The purpose of this project is to recycle waste tires while extending turf life and possibly reduce the number of injuries;
- Or... the field is used for ____ events per year. With the crumb rubber, the field may be safely used for up to 100 events per year. This allows (name additional sports, more practice time on the field) with less turf wear and bare spots that lead to more injuries. Research by Michigan State University shows increased impact adsorption values that should protect the crown tissue of the grass from damage, unlike sand, which is sharp. The increased “bounciness” and decreased bare spots should also reduce injuries.
- The project will help find uses for tires in abandoned scrap tire piles that are breeding grounds for the Asian tiger and Eastern treehole mosquito, which carry infectious and equine encephalitis as well as the Nile Virus (see the Cabinet for Health Services Web site for the latest West Nile Virus information:
http://chs.ky.gov/publichealth/west_nile_virus.htm)
- Disposal of whole tires in landfills is banned because they ‘float’ to the top and interfere with heavy equipment that is compacting the trash or placing the final cap.
- Americans generated 290 million scrap tires in 2003, or about one tire per person, and reused 233 million, or 80.4% according to the Rubber Manufacturers’ Association.
See https://www.rma.org/publications/scrap_tires/index.cfm?PublicationID=11106
- Kentuckians generate about 4 million scrap tires per year and reuse about 3 million per year, mostly as tire derived fuel and landfill liner protection. This project is part of a state effort to create higher-use waste tire markets.
- The General Assembly created the \$1.00 per tire fee in 1998 and reauthorized it in 2004. It will sunset in 2006. (The fee does not include tire disposal costs). The Environmental and Public Protection Cabinet (EPPC) oversees this program. The fee has paid for the clean up of 15 million waste tires abandoned in piles or delivered by citizens to two amnesty programs. In 1994, the state estimated that about 10 million

tires existed in stockpiles. Today, there are no major stockpiles remaining. The EPPC now focuses its major efforts on future scrap tire market development

- Your project will use 8,000 to 12,500 scrap tires per field
- You are paying \$_____ and the state is granting \$_____.

If you need more info, please contact (local contact name) or Eva Smith-Carroll at the EPPC Division of Waste Management at (502) 564-6716.

5. MILESTONES

The example given in the grant application is for athletic fields done under contract and is suitable for those situations.

Note that "Prep field" includes reseeding and fertilizing for re-establishing 100% grass.

One should not spread more than a 0.25 inch thickness of crumb rubber during any one given application, according to the MSU study. Therefore, you need two applications for 0.5-inch and three for 0.75-inch thickness. We recommend 0.75 inch.

The time between each material application should be long enough for the rubber particles to work down to the base of the grass. This is usually until after the next rain event or mowing. An experienced contractor may specify the period.

6. BUDGET DETAIL

An experienced contractor can give you this information.

Waste Tire Materials is the crumb rubber costs at the place of manufacture.

Transportation is the cost of trucking the crumb rubber from the place of manufacture to your location.

Application of Material is the cost of spreading the crumb rubber. State if volunteers are used and, if so, report the estimated time for each application and the number and type of machinery. The state will calculate the estimated value of any volunteer effort.

Equipment should be noted in Application of Material.

Personnel should be noted in Application of Material.

Promotional and Educational should reflect personnel and material costs for press releases, press interviews and speeches to civic clubs.

Grantees are responsible for funding their portion of projects. EPPC funds a project upon approval of the grant. Grantees must submit all required documentation and receive

approval by the cabinet project manager. Failure to comply with reporting requirements will result in reimbursement of funds to the cabinet and ineligibility for future EPPC projects. Funding for each grant project will be determined by the cabinet and is subject to change on a yearly basis. **The cabinet reserves the right to suspend the grant program to accommodate other programmatic changes or initiatives. The cabinet must approve any changes to the grant after it is awarded.**

7. LETTERS OF ENDORSEMENT

Applicants should include letters of endorsement from the principal of the school athletic director, coaches, legislators, PTO president and other similar persons. **Include public officials such as legislators, mayors, county judge-executives, and others. Attach to this application.**

For more assistance in completing the grant application, please call Lisa Evans at the Division of Waste Management at (502) 564-6716. For technical information, call George Gilbert at the same phone number.

EVALUATION CRITERIA

Each of the criteria used to evaluate applications.

- 1. Completeness of Applicant Profile and Project Rationale**
- 2. Completeness of Budget and Supporting Documents**
- 3. Material Usage Efficiency**
- 4. Material Supply Commitment (Letters, bids, contracts, purchase orders, etc.)**
- 5. Project Implementation (Based upon the submitted project tasks and time line.)**
- 6. Promotional and Educational Plan**

OWNER REPORTS

For reporting, include the following with a cover letter by January 31 of each year for two years following the school year for playgrounds or athletic season after the crumb rubber application:

Comments from the coach

“Before” and “after”:

- Pictures.
- Maintenance costs
- Number of injuries
- Media reports such as newspaper clips.

For the second season’s report, just give us the “after” information.

SUBMISSION

Applications that are mailed must be postmarked by Tuesday, January 31, 2006. Applications that are delivered to the cabinet must arrive by 4:00 p.m. on Tuesday, January 31, 2006. The original and two (2) copies of the entire application and any supporting documentation must be submitted in order for the application to be complete. Mail or deliver your application to:

**Division of Waste Management
Waste Tire Program
ATTN: Lisa Evans
14 Reilly Road
Frankfort, KY 40601**

1. APPLICANT PROFILE

Facility Name			
Street Address			
Mail Address			
City		Zip	
Project Contact			
E-mail Address			
Phone		Fax	
<hr/>			
Owner's Name			
Federal Tax ID#			
Type of Applicant			
Mailing Address			
City		Zip	
Phone		Fax	
E-mail Address			
Signature of Owner's Authorizing Official		Date	
Typed or Printed Name of Official			
Official Title			

All applicants must answer the following questions or provide an explanation of why the items are not applicable to the proposed project. You may attach additional pages as required.

2. PROJECT DESCRIPTION

Describe the proposed project and its objectives. Provide a rationale for the project and its current status. Describe the number of people served by the project and the approximate geographic area or community that will benefit from the project.

3. MATERIAL DETAIL

Provide written documentation regarding the specifications, quantity, and cost of the waste tire material.

4. PROMOTION DETAIL

How will you inform and educate the surrounding community about the project. You may discuss newspaper or other media to be used.

5. MILESTONES

Please list a description of each key task and its approximate due date (see example below).

Progress Reports are required and must be submitted as determined by the cabinet. For projects such as spreading crumb rubber on an athletic field, only one construction report is required at the end of the work. The cabinet requires two annual reports later for statistics on reduced injuries and the increased number of events on athletic fields. Please note that the cabinet will use the below completion dates to assess grant compliance.

SAMPLE PROJECT MILESTONES

(The number of activities may vary depending on project type)

XYZ High School Football Field Project

Task Description	Estimated Completion Date
1. Prep Field to Re-establish Vegetation	March 15, 2006
2. Bid and Award Contract	May 1, 2006
3. Contact Newspapers, Television and Radio	May 15, 2006
4. Contract start	July 1, 2006
5. Contract complete	July 30, 2006
6. Field ready for practice	July 15, 2006
7. Construction Progress Report	August 1, 2006
8. Final Report #1	January 31, 2007
9. Final Report #2	January 31, 2008

(A format is provided below; you may use it or develop a timetable of activities separately.)

Project Name: _____

Task Description	Estimated Completion Date

6. BUDGET DETAIL

Complete the budget table below. Include all costs anticipated to complete the project. Do not include any long-term maintenance or refurbishment costs. (If the project is being done by contract, just insert the estimated contract price.)

BUDGET CATEGORY	COST
Waste Tire Materials	
Transportation	
Application of Material	
Equipment	
Personnel	
Promotional and Educational	
TOTAL	
Total Grant Request (75% of total):	
Amount Matching Funds (25% of total):	

7. LETTERS OF ENDORSEMENT

Attach to the application.